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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,979	02/20/2004	Shintaro Asuke	9319S-000648	4405

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HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER	
LAZORCIK, JASON L	
ART UNIT	**PAPER NUMBER**
1731	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/783,979	ASUKE ET AL.	
	Examiner	Art Unit	
	Jason L. Lazorcik	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/20/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *See Continuation Sheet*.

Continuation of Attachment(s) 6). Other: 03/13/2006, 05/30/2006, 07/21/2006.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 through 9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method or apparatus designed for the cleaning, surface modification, and thin film deposition procedures as applied to a liquid crystal substrate, does not reasonably provide enablement for a continuous treatment apparatus or method as broadly set forth in the identified claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention set forth in claims 1-5 and 9 or to use the invention set forth in claims 6-8 as commensurate in scope with these claims. In other words, despite the all-encompassing breadth of subject matter included under the claims directed to a continuous-treatment apparatus and a continuous treatment method, the disclosure has been found to enable only a subset of this claimed scope which pertains to that apparatus and method for coating a film on a liquid crystal display substrate.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1 and 3-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Grier (US 6,718,216). Grier teaches a method and apparatus for automatically washing a car or "a continuous-treatment apparatus" and method.

With respect to Claims 1, 3, 6-8, and 9, Grier teaches an automatic car wash with "an engaging member...(which) engages the wheel such that the vehicle may be moved by the conveyor system"(Column 9, lines21-27) which is read as the claimed object carrier. Grier further teaches that the wash "also includes a side blaster, a washing assembly, a display, a dryer assembly and a dryer display...The washing gantry includes washing and waxing devices that direct high pressure water, cleaning agents/chemicals and the like onto the vehicle" (Column 6, Lines 50-63). The disclosed wash is understood to include plural types of treatment units which subject the surface, which is targeted for treatments, to sequential different treatments at or near atmospheric pressure. It is understood that any of the disclosed treatments may inherently be disassembled or replaced from the automatic car wash at any time or that

the units may be changed at will as claimed. Further, it is disclosed that "the side blasters may spray the sides and/or **undercarriage** of the vehicle" (Column 7, lines 22-23) which is understood to read on the claim limitation wherein the surface targeted for treatments of the object is facing downward, and the plural types of treatment units are operated upward to treat the surface.

Claim 4 is anticipated by the rejection of Claim 1 above wherein the washing and waxing devices are understood to be functionally equivalent to the claimed cleaning treatment unit, surface modification treatment unit, and liquid agent application treatment unit and the drying unit is understood to both dry the automobile and "anneal" the applied chemicals on the surface of the vehicle.

Claim 5 is anticipated in light of the rejection of Claim 1 wherein a typical automobile is inherently understood to comprise at least one substrate of a display device.

Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura (US 6,921,148).

With respect to Claims 1,5,and 6, Nakamura teaches a method of manufacturing the substrate of a display device wherein the substrate is selectively held by a carrier and carried along the carry direction (column 76, Lines 37-41) and through various process chambers wherein the object is subjected to sequential different treatments. As with any apparatus, the individual chambers may be disassembled and replaced at will.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grier (US 6,718,216B) as applied to Claim 1 above. Grier fails to explicitly teach that the engaging member which holds the tire of the automobile or "the object" should utilize suction as a means for the securing and holding of the surface targeted for holding. Greier does instruct that the engaging member may be moved by the conveyor system to advance the vehicle through the car wash (Column 9, Lines 21-28). This disclosure is understood to read on the guide component guiding the engaged object in the carrying direction and the driving portion transferring the engaged portion along the guide component. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize any effective and non-destructive means including suctioning for securing said automobile tire within the automatic automobile wash for the disclosed engaging member.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 6,921,148) as applied to claim 1 above, and further in view of Goodwin (US 5,324,155). Nakamura is silent regarding the structural details of the transport device and therefore fails to teach that the transport device described for transferring the substrate between treatment chambers should provide a suction portion to suction and hold the surface targeted for holding, which is opposite the surface targeted for treatment. Nakamura further fails to explicitly indicate that transport device (855) comprises a guide component for guiding the holding portion in the carrying direction and a driving portion for transferring the holding portion along the guide component. Goodwin teaches a wafer handling system including a pair of robot arms and a drive portion with a plurality of ports providing a lifting action for a substrate by utilizing the Bernoulli principle. The device provides "low pressure" or a suction between the device and the surface of the substrate without contacting the substrate. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a handling system in accord with the Goodwin apparatus as the transport device in the Nakamura process. This would have been an obvious substitution to anyone seeking to minimize the possibility of damaging a fragile substrate by direct contact with the handling system or transport device.

Claims 3,4, 7, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 6,921,148) as applied to the appropriate parent claims 1 and 6 above.

Nakamura fails to explicitly indicate that the treatment surface faces downward and that the treatment units are operated upward as set forth in Claims 3, 7, and 9. Nakamura however sets forth the fundamental process steps in accord with the claimed invention and an apparatus for the performance of these steps. In the absence of any unexpected results, it would have been obvious to one of ordinary skill in the art at the time of the invention to operate the disclosed apparatus in any orientation as chosen according to the discretion of the operator.

With respect to Claims 4 and 8 and in light of the rejections of Claim 3 and 7 as set forth above, Nakamura teaches a plasma processing process (Column 76, Lines 7 to Column 80, Line13) which reads on the claimed cleaning treatment unit and surface modification treatment unit. The disclosed liquid drop discharge process (column 86line65 – Column 87, line12), the drying process (Column 87, line 42-43), and the heat processing step (Column 88, lines35-40) are understood to read upon the liquid agent application treatment unit, drying treatment unit, and annealing treatment unit, respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Lazorcik whose telephone number is (571) 272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLL

STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700